



# Geiger-Muller Counter Tube from Photo Film Case

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## SUMMARY

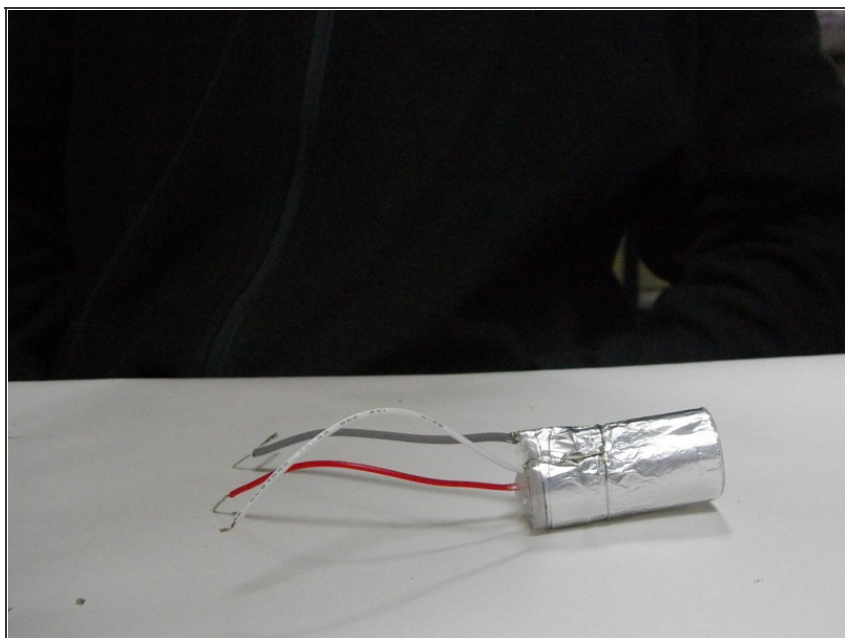
I found something to introduce. Japanese hobby electric kit [Air Geiger counter kit]

### Step 1 — Geiger-Muller Counter Tube from Photo Film Case



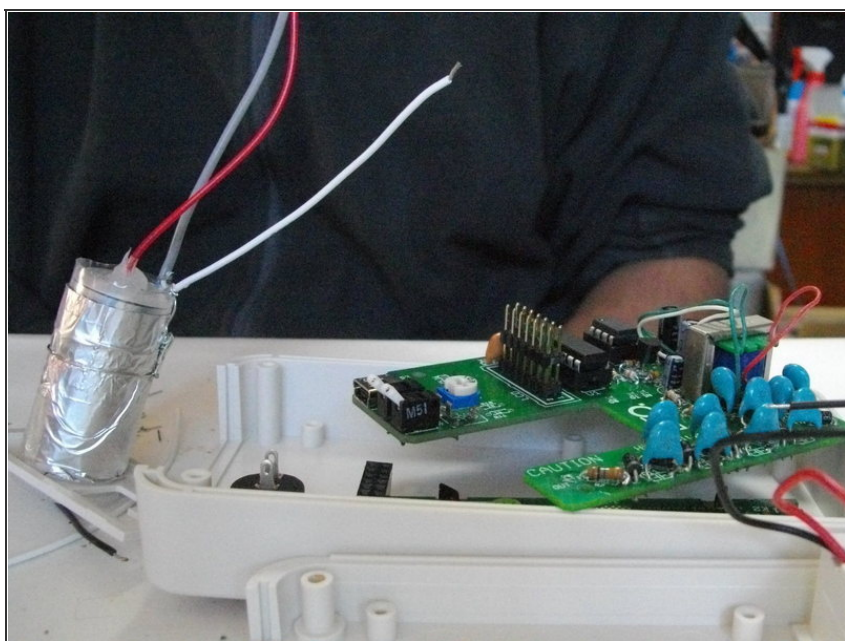
- This DIY kit counts radiation in the air. Since after Fukushima, incident Geiger counter can be found some electrical store. However this kit is different from other including hobby electric hand work.

## Step 2



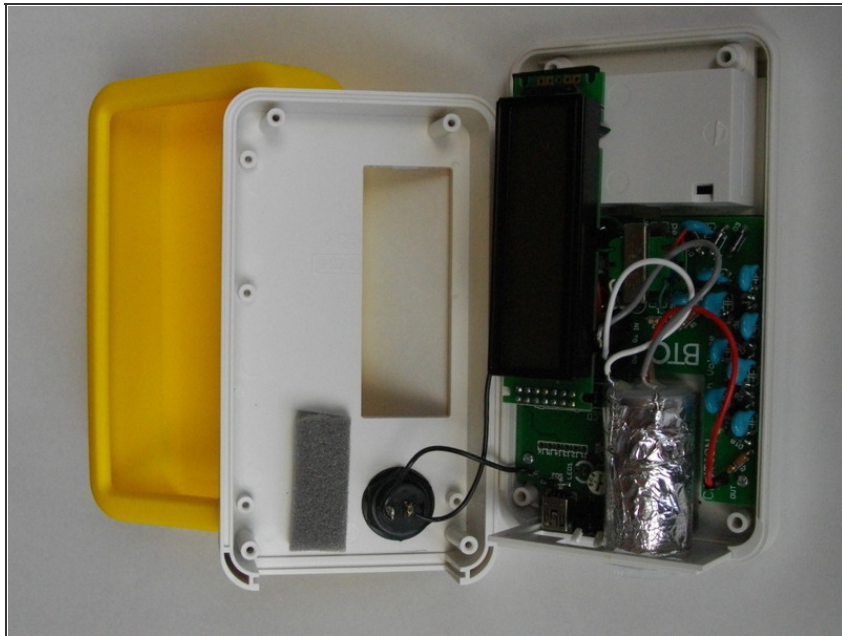
- Biggest point is I made my own Geiger-Muller counter tube from familiar material. It's made from photo film case. For Cathode use office paper, for Anode single lead wire. Sensor part use tin foil, food wrapping for incidence film. Use Epoxy bond to assemble.

## Step 3



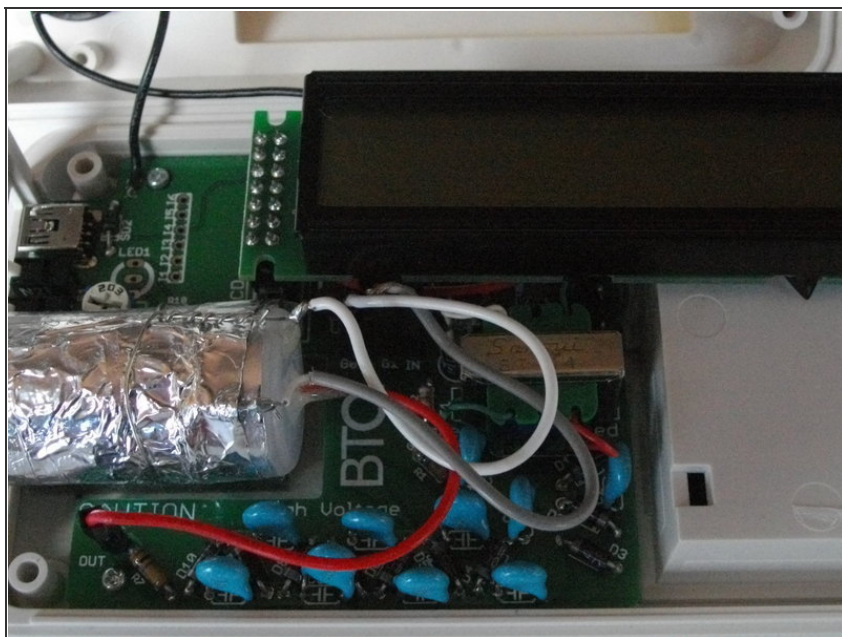
- Ordinary Geiger counter tube use Argon, Helium for inert gas, Halogen for continuous discharge inhibition gas. This kit use Nitrogen for inert gas, Butane gas (lighter gas) for continuous discharge inhibition gas. This kit cannot decrease inner pressure of tube, instead raise voltage to 3200V for discharging.

## Step 4



- When I finish building, fill gas into tube. Then Plateau voltage (counting voltage) checking. Normal Geiger counter has plateau voltage already set in individual tube but this counter tube I need to find my own plateau voltage because tube is my own. This kit has onboard data logging software. When I use data logging software it has plateau voltage finding function, it automatically increase voltage in certain time span to find plateau voltage.

## Step 5



- Setting is all done. Plateau voltage is controlled by microprocessor so stable counting can be done. This counter inlet is wide so once adjusted tube sensibility is very high. Inlet size is very important because Geiger counter is count number of radiation inside the tube at a time.



## Step 6



- It took me about 1 whole day to assemble including adjusting but it was worth it to learn about radiation while making. I will recommend to you when you are interested in radiation. This kit can be purchase this kit from Online shop. at "JAPAN KOSAKU" <http://j-kosaku.jp> Manual and circuit diagram can be look at pdf file form (<http://j-kosaku.jp/Products/001E-GM/>)

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